Vensai Technologies

"Providing Quality, Value, and Change"

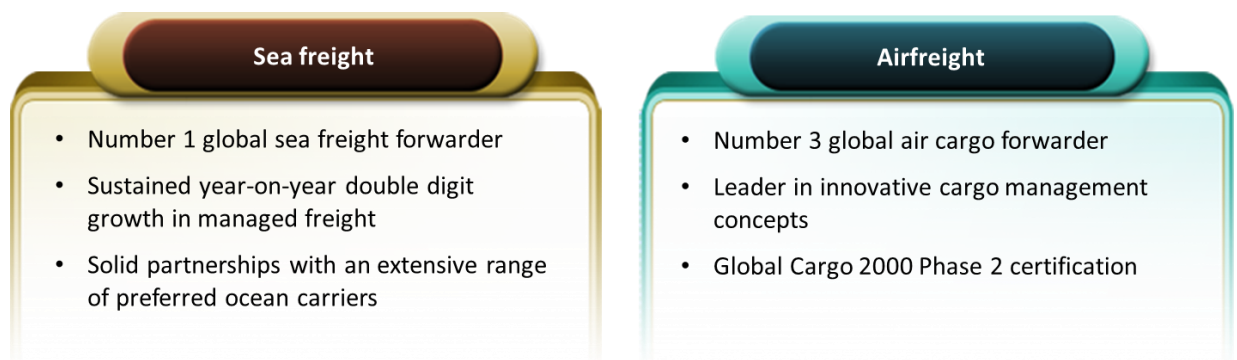increased reliability, cost-effectiveness, and a better client experience.

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Case Study:

KUEHNE+NAGEL

1. About the Client:

- World's leading logistics providers

- Has more than 1000 offices in over 100 countries

- Over 63,000 employees

Sea freight

- Number 1 global sea freight forwarder
- Sustained year-on-year double digit growth in managed freight
- Solid partnerships with an extensive range of preferred ocean carriers

Airfreight

- Number 3 global air cargo forwarder
- Leader in innovative cargo management concepts
- Global Cargo 2000 Phase 2 certification

Vensai Technologies is one of the Preferred Vendor for Kuehne + Nagel

➢ Vensai offers development and production support services for KN from past 3 years. We developed an enterprise application named "CUSTOMS NEW TECHNOLOGY" for KN to manage imports and exports in USA and Imports for Canada

➢ Also we are assisting them to develop extensions required for any of the KN projects which are developed using the KN custom framework

➢ Primarily we are serving KN in logistics based needs

➢ Developing a Google like search engine to make use of massive customer data that has been generated from past few decades, so as to ease and enhance the future business

➢ We are in a long term association and commitment with KN to migrate their existing AS400 and mainframes based systems to cutting edge internet based technologies towards attaining more customers and business across globe and reach number #1 in logistics

2. Summary of the Case Study

AES is an acronym for Automated Export System. US law requires that a permission request be electronically filed with the US Customs and Border Protection (CBP) and US Census Department prior to exporting goods. Goods cannot legally cross the US border en-route to a consignee located in a foreign country until permission to export have been granted from CBP/US Census. Permission is verified by an Internal Transaction Number (ITN) received electronically in response to a permission to export request. The ITN number must be printed on specific export shipping documents such as the KN House Bill of Lading. The AES requirement applies to all modes of transportation.

The New AES Technology application will be standalone utilizing web technology. Significant improvements will be realized compared to the legacy AS/400 tool in use today and will be apparent in this document. Removing the current dependency upon Ciel as the exclusive host system for source data with which to create an AES filing will ease existing configuration management constraints and general system maintenance costs.

Business History and Achievements:

2011 & 2012

AES – Automated Exports System **(*)**

    A System which takes care of exports originated from USA to other countries.

PARS – Pre-Arrival Review Notification System **(*)**

    A System which takes care of imports that comes in to CANADA.

2013

USIMP – USA IMPORTS **(*)**

    A System which takes care of imports that comes in to USA.

SALOTM – SALOG TO OTM INTERFACE **(*)**

    An extension for KN to use in collaboration with KN SALOG system

KNOOGLE – KN+GOOGLE **(*)**

    A Google like search engine which is custom built for KN to search their huge customer base across the globe from past few decades.
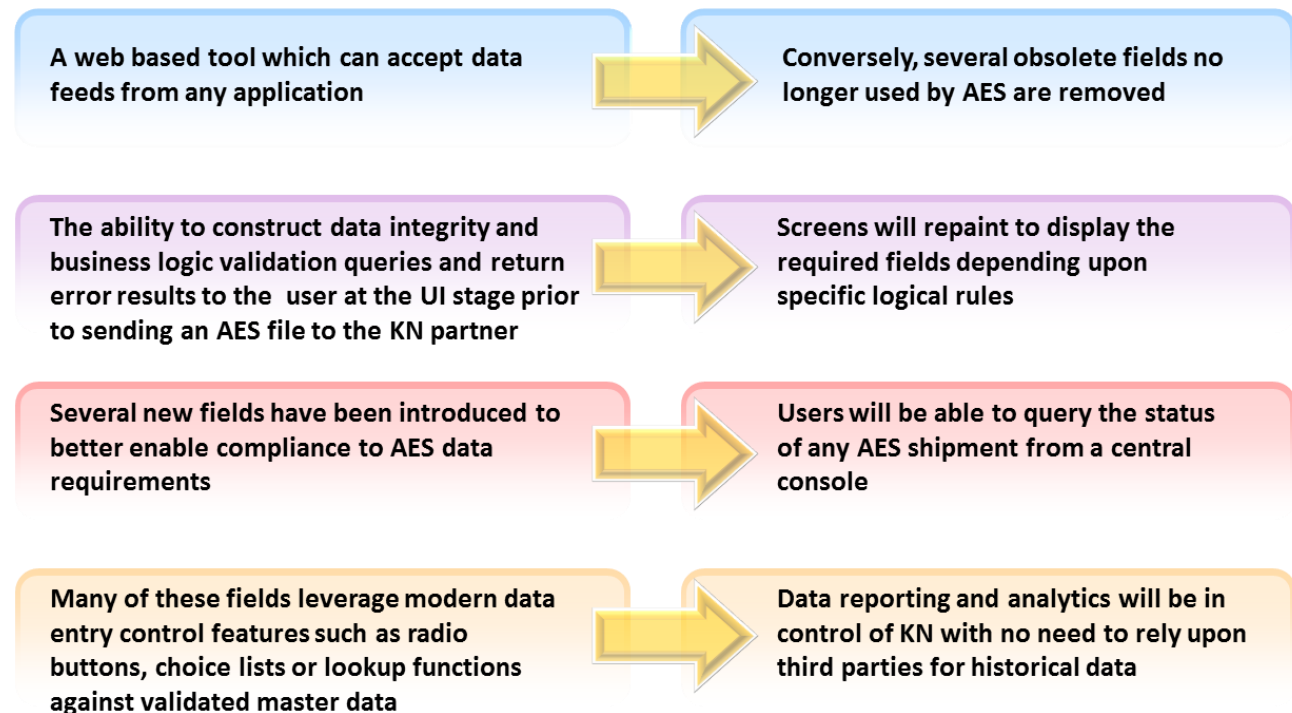
(*) – Production   (*) – Under Development

Case Study: AES New Technology

3. The Activity

The AES New Technology product is a discrete standalone application. It will enable data collection, validation, and EDI file transmission tasks required to submit an AES filing. The application will ultimately replace a legacy application which has been in use for over 10 years.

The New Customs Technology application's database and UI will offer several distinct advantages:

A web based tool which can accept data feeds from any application	Conversely, several obsolete fields no longer used by AES are removed
The ability to construct data integrity and business logic validation queries and return error results to the user at the UI stage prior to sending an AES file to the KN partner	Screens will repaint to display the required fields depending upon specific logical rules
Several new fields have been introduced to better enable compliance to AES data requirements	Users will be able to query the status of any AES shipment from a central console
Many of these fields leverage modern data entry control features such as radio buttons, choice lists or lookup functions against validated master data	Data reporting and analytics will be in control of KN with no need to rely upon third parties for historical data

3.1 Business Process

Listed below are the main functional activity categories:

3.1.1 Populate Shipment Data into AES Application

This process covers the identification and collection of all data elements necessary to submit an AES filing for a given shipment.

3.1.2 Transfer Shipment File to Partner

This process involves formatting the data in accordance with an agreed upon standard developed between KN and Partner.

3.1.3 Receive Response File Messages from Partner

This process involves electronic receipt of ITN numbers from Partner and populating the Host system with the ITN number so the shipment can be exported.
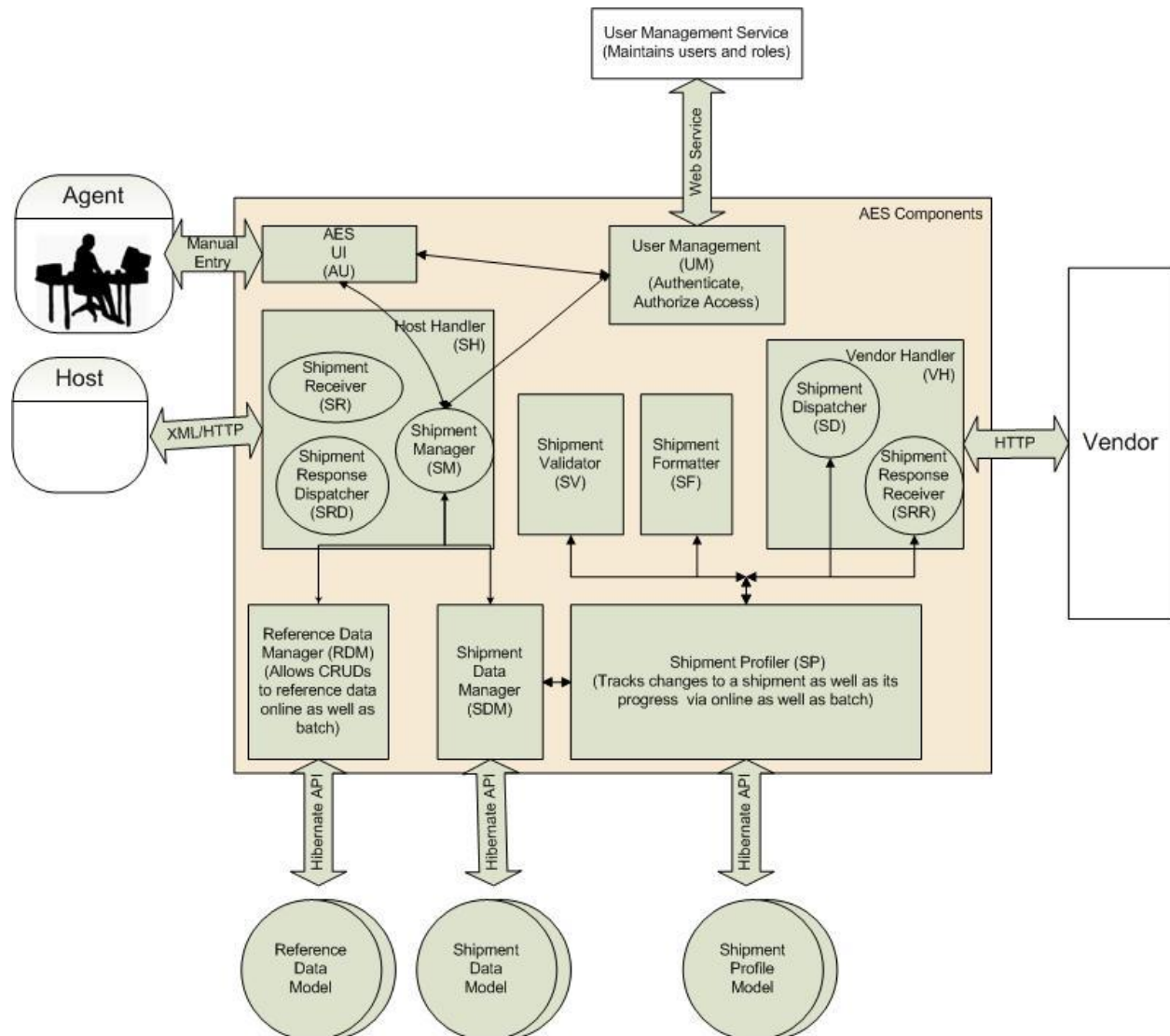
3.1.4 Receive Response File Messages from Partner

This process involves the tasks KN must perform to execute a re-transmission to Partner/CBP of modified data for a specific SRN (Shipment Reference Number) that was previously transmitted.

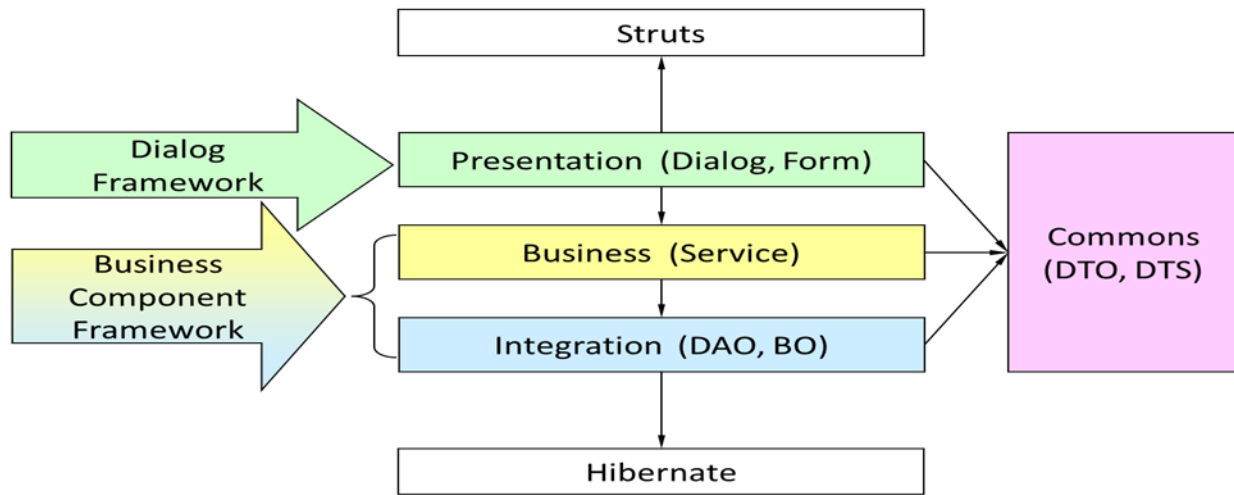### 3.1.5 Update Host System with ITN Number

This process involves adding the ITN number to the shipment record in the host system in order to print the ITN number on KN generated export shipping documents such as the Bill of Lading, House Air Way Bill, or House Ocean Bill of Lading.

4. System Context

Case Study: AES New Technology

5. Technical Approach
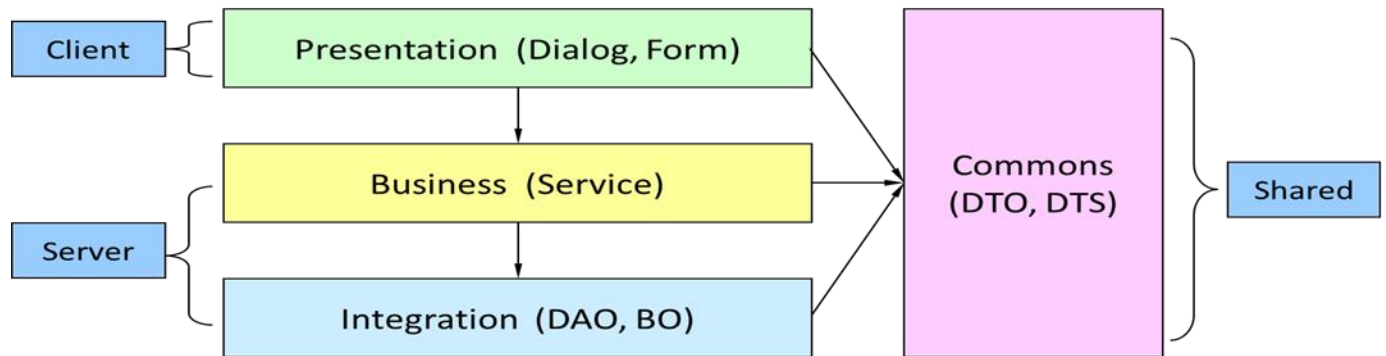
Three layer Architecture and the WebStandard Framework

WebStandard Project Structure
Why Four Eclipse projects for each business component?
- **To manage the dependencies between layers!**
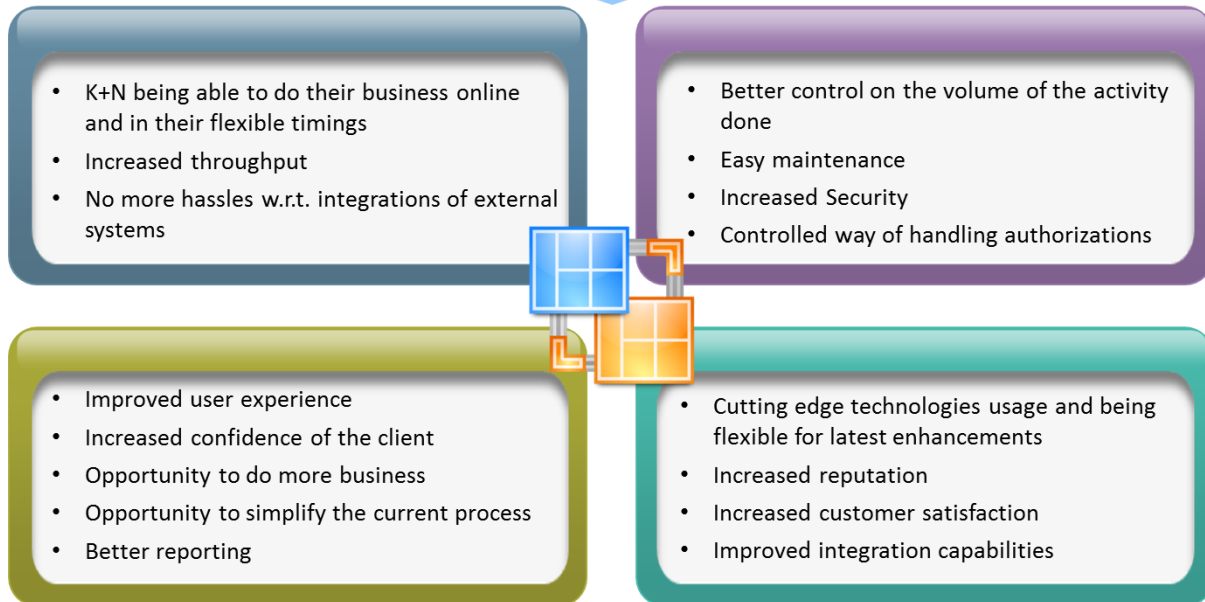
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6. The Challenges – Barriers and Enablers

- Learning the client specific framework , KNWEBSTD and deliver as expected
- Limited access to the technical team of the framework development
- Limited training on the framework
- A combination fresh and experience resources at work.
- A centralized and reusable way of doing the auditing across the system.
- Scheduled Jobs which runs 24*7 to ensure the integration between heterogeneous systems using REST based services and XML.
- Agreements on XSD's among the parties involved.
- The Agile process being flexible to adapt to the changes based on client priorities and timelines.
- CASTOR usage across for marshalling and un-marshalling
- Onsite and Off-shore model with a tight dependency to deliver with extreme co-ordination and team efforts.
- Cloud environment which is secured and limited for quick changes
- Liquibase usage so as to ensure database integrity across the teams and deployments
- ISO 9001 process at vendor place (Vensai Technologies)
- An excellent team who can understand client business specific demands and timelines
- Selenium scripts for automated way of testing the application
- A custom Java based scripting to automate the processes which are disconnected
- Information logging to track the user key events so as to understand user business work flow

7. Outcomes

- A team of 10 people who learned KNWEBSTD framework and can work on it
- An expertise built in to handle logistics based projects
- An experience to handle complex systems where lot of touch points and integrations exists
- Team is now capable of adapting to the new technologies with in no time

- Negligible attrition due to the clarity of thought and inputs at work
- People enjoying the technology and likes what they do on projects

- Knowledge base developed with lot of documents which can be useful for the upcoming teams
- The training materials so as to enable new members of the team to join quickly contribute to the project success
- Consistency in the deliverables Quality and timelines

- Improvements and expertise in handling onsite off-shore projects.
- Being able to do multitasking by moving across the projects and technologies

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8. Impact

- K+N being able to do their business online and in their flexible timings
- Increased throughput
- No more hassles w.r.t. integrations of external systems

- Better control on the volume of the activity done
- Easy maintenance
- Increased Security
- Controlled way of handling authorizations

- Improved user experience
- Increased confidence of the client
- Opportunity to do more business
- Opportunity to simplify the current process
- Better reporting

- Cutting edge technologies usage and being flexible for latest enhancements
- Increased reputation
- Increased customer satisfaction
- Improved integration capabilities

9. Sustainability

- The project is an on-going project where lot of future enhancements is possible
- The sizing w.r.t. users and volume of business being analyzed and steps taken towards addressing them. Infrastructure as well as technical aspects have been taken care
- Project rolled out and in use by US, Canada & German audience
- Highly Qualified and experienced people at work
- Domain Expertise
- Agile Development
- Off-shore based and cost-effective
- Process Oriented - ISO 9000 & CMMI
- Lean Teams
- Proactive and customer focused
- Align work hours as per customer's time zones
- Fine balance of juniors and seniors across teams
- Ability to operate on multiple projects
- Safe and secured as we work on the cloud environment

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10. Conclusion

Overall clients are satisfied on development and production support efforts and offering new projects which are future revenue generators. The project team is also feeling good about being participated in this project to serve K+N.

- Team is now very confident on taking up projects to be done using KNWEBSTD framework
- Gained Logistics domain expertise and hence better understand client's requirements
- Keeping a track of the learnings so that we do not repeat the similar failures
- Team is satisfied with the work being done w.r.t. technology and complexity and ready to take more

Vision

Our vision at Vensai is to build a people's organization that will pioneer innovation and change, and whose brand will be recognized globally.

Mission

To build practical and highly competitive simple solutions that will ensure business results and facilitate the growth and development of business.

Core Values

- ➢ Quality
- ➢ Value
- ➢ Change

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About Vensai:

Summary

Founded in the year 2000, the main goal of Vensai is to deliver "Quality", "Value" and "Change" to each and every customer. We are an innovative software development company that reaches out to provide comprehensive Application Development and Infrastructure Management solutions. The dynamic management team at Vensai contributes greatly with their innovative ideas by adapting latest technologies and modern methods to help the needs of its customers.

Specializing in Application Development services, Infrastructure services, Cloud services, and Testing services, Vensai has become a partner of choice to the world's top organizations. In a short span of time, we have the satisfaction of being one of the leading names in the domain of application development with hands-on ability in integrating people, processes and products with customized and cost-effective solutions.

We are headquartered in Atlanta, Georgia with two global delivery centers, one at Hyderabad and the other one at Vishakhapatnam in India currently numbering over 150 employees and growing at a rapid pace all across the globe.

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